

PATENT ABSTRACTS OF JAPAN

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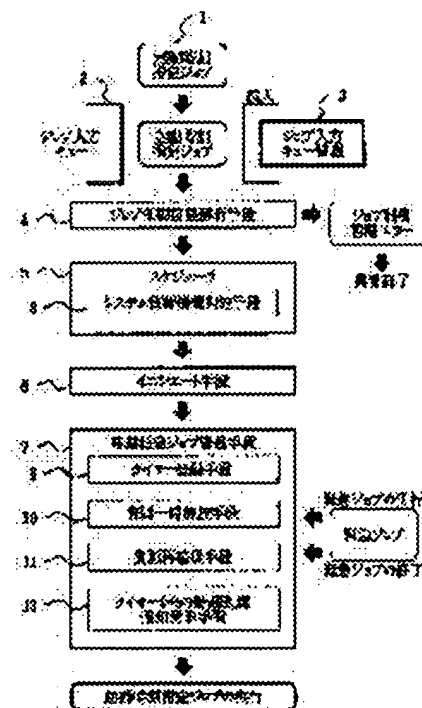
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(54) JOB EXECUTION CONTROL DEVICE

(57)Abstract:

PROBLEM TO BE SOLVED: To surely start a job at a specified time by executing preprocessing before the arrival of the specified time.

SOLUTION: A job control language analyzing means 4 analyzes the job control language of an inputted job, and at the time of detecting an error, urges the reinput of the job. A system load information judging means 8 urges an initiation means 6 to execute the initiation processing of the start time specified job at the time when the system load is low. After the execution of the initiation processing, a time specification job managing means 7 temporarily stores and manages the job before its execution. If an emergent job or the like is generated during the storage, a resource temporary releasing means 10 temporarily releases a resource secured by the initiation processing. After the end of the emergent job, a resource resecuring means 11 resecures the resource.



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CLAIMS

[Claim(s)]

[Claim 1] It is job execution-control equipment characterized by to have a time designated job-management means manage the job which analyzed job control language for the job management which manages the job specified and supplied so that it may start at predetermined time of day, divided into the job-control-language analysis means to which the reclosing of a job is urged, and an initiating means perform initiation, such as resource reservation, when an error detects, is just before activation and stopped after said initiation termination.

[Claim 2] Job execution control equipment according to claim 1 characterized by establishing a system load information judging means to choose the time when the load of a system is low and to operate said initiating means.

[Claim 3] Job execution control equipment according to claim 1 characterized by including a release means and a resource re-secured means by which the resource released temporarily is re-securable in said time designated job management means temporarily [resource] currently can perform momentary release of this resource while [said] carrying out resource reservation.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the job execution control equipment in a computer system.

[0002]

[Description of the Prior Art] This conventional kind of job execution control equipment is used only for automation of starting of a job. for example, the Monitoring Department which the job execution control method indicated by JP,02-222056,A is used in order to attain automation of starting of the batch job in midnight, and supervises the system input section and the time check which investigates current time of day -- it consists of comparators which compare the section with current time of day and the current starting appointed time of day. if the Monitoring Department recognizes a starting time designated job -- a time check -- the section investigates current time of day and time of day and the starting appointed time of day current by the comparator are compared. And if it reaches at the starting appointed time of day, job control language will be read from the system input section, and activation of a job will be started.

[0003]

[Problem(s) to be Solved by the Invention] Since it does not understand until the error of the job control language of the supplied job, the resource which the job is going to secure become the starting appointed time of day by the conventional job execution control method mentioned above, Even if the starting appointed time of day comes, the ejection waiting from job input queue and the empty waiting of a resource occur, or becoming abnormal termination by job-control-language error, and starting a job certainly at the starting appointed time of day has the trouble of being difficult.

[0004] The purpose of this invention is to offer the job execution control equipment by which a job is certainly started at the specified time of day in view of an above-mentioned point.

[0005]

[Means for Solving the Problem] The job execution-control equipment of this invention analyzes job control language for the job management which manages the job specified and supplied so that it may start at predetermined time of day, when an error detects, it divides it into the job-control-language analysis means to which the reclosing of a job urges, and an initiating means perform initiation, such as resource reservation, and it is characterized by to have a time designated job-management means manage the job which is just before activation and stopped after said initiation termination.

[0006]

[Embodiment of the Invention] Next, this invention is explained with reference to a drawing.

[0007] Drawing 1 is drawing showing one example of this invention.

[0008] Reference of drawing 1 constitutes this example from the starting time designated job 1, job input queue 2, the job-input-queue management 3, the job-control-language analysis means 4, a scheduler 5, an initiating means 6, and a time designated job management means 7. Furthermore, a scheduler 5 has the system load judging means 8, and the time designated job management means 7 has

the release means 10, the resource re-secured means 11, and the notice receipt means 12 of time-of-day attainment the timer registration means 9 and temporarily [resource].

[0009] The job-control-language analysis means 4 takes out the starting time designated job 1 which is a job as which the starting time of day was specified from job input queue 2, analyzes job control language, and hands it over to a scheduler 5. Since it terminates abnormally when the error of job control language etc. is detected at this time, the reclosing of a job can be urged.

[0010] A scheduler 5 has the system load information judging means 8, and thereby, when a load is low, the initiating means 6 is urged to it that initiation, such as resource reservation of the starting time designated job 1, is performed. The initiating means 6 performs initiation of the starting time designated job 1 handed over from the scheduler 5, and hands it over to the time designated job management means 7.

[0011] The time designated job management means 7 performs timer registration using the timer registration means 9, it manages the time designated job 1 handed over from the initiating means 6 until it becomes starting time of day, it recognizes the notice of the purport which became starting time of day from the timer with the notice receipt means 12 of time-of-day attainment, and performs the starting time designated job 1. When an urgent job etc. tends to use the resource which the starting time designated job 1 has secured, the time designated job management 7 performs momentary release of a resource using the momentary release means 10 of a resource, and by termination of an urgent job etc., the re-secured means 11 of a resource is used for it, and it performs re-reservation of a resource.

[0012] Next, the injection of the following starting time designated jobs A and B is planned, and actuation of the example at the time of moving an urgent job before starting time of day is explained. In addition, injection time of day is set to 10:00.

[0013] Starting time designated job A starting 13:00 resources File a (it exists in Disk A)

File b (it exists in Disk B)

Starting time designated job B starting 15:00 resources File b (it exists in Disk B)

File c (it exists in Disk B)

When two jobs, the starting time designated job A and the starting time designated job B, were supplied to 10:00, it was supplied to job input queue 1, it could be folded [could be the error] into the job control language of the starting time designated job B in the place handed over by the job-control-language analysis means 4 by the job-input-queue management 3, and it terminated abnormally. Here, when the job control language of the starting time designated job B was corrected and the reclosing was performed, it was able to supply normally.

[0014] Since the load of a system fell at the 10:10 times, a system load information judging means 8 by which this was detected urged initiation to the initiating means 6, and the initiating means 6 performed initiation which includes resource reservation of File a and File b etc. in response to it.

[0015] At the 12:00 times, abnormalities occurred on the disk A including the file a the starting time designated job A is due to use for 13:00, and the urgent job for investigating needed to be started. In this urgent job, in order to investigate a disk, while the resource of an entire disk needed to be secured and the resource reservation of the file in a disk had been carried out at least one, it cannot start. However, when the urgent job was supplied, with the release means 10, the file a which is the resource which the starting time designated job A had secured was released temporarily, and was able to start the urgent job temporarily [resource].

[0016] Termination of the urgent job re-secured the file a which is the resource which the starting time designated job A uses with the resource re-secured means 11. In investigation by the above-mentioned urgent job at this time, since there was no problem in File a, it turned out that the starting time designated job A is started as it is, and is satisfactory.

[0017] When set to 13:00, the notice of time-of-day attainment was notified to the notice receipt means 12 of time-of-day attainment from the timer, starting of the starting time designated job A was performed, and it ended normally. When set to 15:00, the starting time designated job B was started similarly, and terminated normally.

[0018] In the example explained above, the release means 10 and the resource re-secured means 11 are

not indispensable components the system load information judging means 8 and temporarily [resource]. That is, the **** trap ***** system load information judging means 8 is unnecessary in making initiation carry out to the initiating means 6 regardless of the loaded condition of a system. Moreover, if the consideration to urgent job generating is not paid, the release means 10 and the resource re-secured means 11 become unnecessary temporarily [resource].

[0019]

[Effect of the Invention] As explained above, the job execution control equipment by this invention divides job management into a job-control-language analysis means and an initiating means, performs ejection from job input queue before starting time of day, and writes it in the configuration which analyzes job control language, and the ejection waiting from the job input queue in the time of starting time of day coming does not occur, but it has the effectiveness that the error of job control language can be discovered before starting time of day.

[0020] Moreover, by forming a release means and a resource re-secured means in a time designated job management means temporarily [resource], also when an urgent job occurs, it has the effectiveness that the empty waiting of the resource which the starting time designated job which can cope with the processing uses does not occur.

[0021] Furthermore, in order to urge him to choose the time when the load of a system is low by forming a system load information judging means in a scheduler, and to carry out initiation to an initiator means, it has the effectiveness that the utilization ratio of a system resource can be raised.

[0022]

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is drawing showing one example of this invention.

[Description of Notations]

- 1 Starting Time Designated Job
- 2 Job Input Queue
- 3 Job-Input-Queue Management
- 4 Job-Control-Language Analysis Means
- 5 Scheduler
- 6 Initiating Means
- 7 Time Designated Job Management Means
- 8 System Load Information Judging Means
- 9 Timer Registration Means
- 10 Resource One Time Release Means
- 11 Resource Re-Secured Means
- 12 Notice Receipt Means of Time-of-Day Attainment

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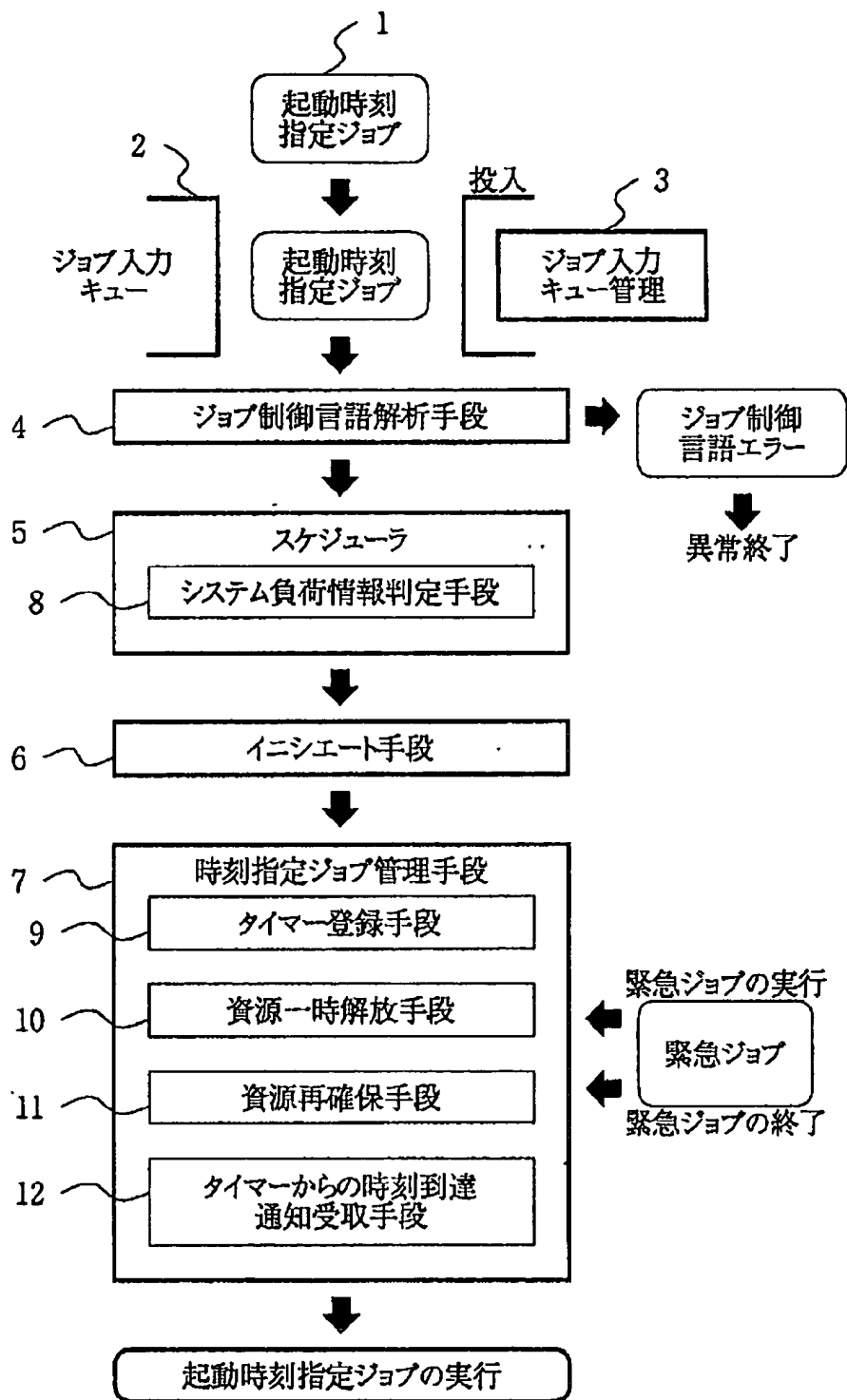
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DRAWINGS

[Drawing 1]



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